Work Ord <i>May-13-13 1:0</i>		1532		*101	1532*							Page 1	
Item ID: Revision ID:	D3199-1			Accept	*N900	040	100)*	Setup	Start	*N	S1*	-
Item Name:	Bracket									Stop	*N	S2*	
Start Date: Required Date: Reference:	5/13/13 : 5/31/13	Start Qty: 30.00 Req'd Qty: 30.00	*30 *30	* * * 36*	Cust Item I Customer:	D:							
Approvals:	Drogges Die	an: MCS	Date: 13-05-	Tooling:	n.	ate:	- ,		Run	Start	*N	R1*	
Approvais.		<u>A</u> (3	Date:			ate:				Stop		R2*	
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept	t Rej Qty		Reject Number	Insp. Stamp	_
Draw Nbr	Rev	vision Nbr											
D3199	Е												
*100 *100*		FLOW WATER JET		0.00				36		()		Ae	
Waterjet FLOW CNC Water		Memo Cut as per D Dwg Rev:_ Prog Rev:_	E	0.00					-			13.08.3	O
		Deburr if re	quired										
110		QC2- Inspect parts off m	achine FAI/FAIB	0.00				21	_	_		10	
QC		Memo		0.00				36	()		13.08.3	0

Quality Control

											DQA:	Da	te:	
NCR:	Yes	/ No				WORK ORDER NON-	CO	NFOR	MANCE / UP	DATE	QA Closed:	Da	te.	
Work Orde	or.					DISPOSITION				AGAINST D	PARTMENT			
Part f	No.					Rework Scrap Use-as-is Work Order Update		1	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
Root Cause		Date	Step	Qty	Desc	ription of work order update or Non-conformance		Initial hief Eng	i	tion ription	Sign & Date	Verification	n	QC Inspector
Doc/Data Equip/Tooling							T							•
Operator														
Material Setup														
Other Process														
Supplier														
Training Unapproved														
						F	AU	LT CATE	GORY					-
Landi	ng (Gear				General								
		Bending			·	Bend		Grain		Γ	Ovalized			Pressure/Forced
		Centre No	ot Concei	ntric to	o/s	BOM/Route		Hardwa	are	Γ	Over/Under	tolerance		Temperature/Cure
		Cracks				Broken/Damaged		Inspect	ion Incomplete	Ī	Part Incorred	ct		Weld

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Wrong Stock Pulled

Other

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Crushed/Crimped

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Work Ord <i>May-13-13</i> 1:0-		01532		*101	532*						Page 2
Item ID: Revision ID: Item Name:	D3199-1 Bracket			Accept	*N900040	າ1ດເ) *	Setup	Start Stop		S1* S2*
Start Date: Required Date: Reference:	5/13/13	Start Qty: 30.00 Req'd Qty: 30.00	*30* *30*	• .	Cust Item ID: Customer:		•			IW	
Approvals:	Process Pl	an:	Date:	Tooling: SPC (Y/N):	Date:)	Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center I 120 *120* QC Quality Control	D	Operation Description QC8- Inspect parts - secon	nd check	Set Up/ Run Hours 0.00 0.00 0.00 Set Up/	Tool ID Tool	# Plan Code	Accept Qty 360	Rej Qty		Reject Number	Insp. Stamp
130 *130* Small Fab Small Fab		Small Fab Memo Form as per o	iwg D3199 use DT9723	0.00			36				SB 13/0

DAS 27 9-89

0.00 139 17

0.00

QC5- Inspect part completeness to step on W/O

Memo

140

*14**0***

Quality Control

											DQA:	Da	ate:	
NCR: Y	es / No				WORK ORDER NON-	COI	NFORM	MANCE / UP	DATE					
-											QA Closed:	Da	ate:	
Work Orde	er:				DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS		
Part N				······	Rework Scrap Use-as-is		r	Skid-tube Machining Moforming	Crosstube Small Fab Finish <u>i</u> ng		4	Water Jet d. Eng. Coor. e/Packaging		Engineering Quality Other
NCR N	lo				Work Order Update]		Large Fab	Composite]	Supplier	_	
Root				Descri	ption of work order update	Π	nitial	Act	ion		Sign &			
Cause	Date	Step	Qty	Ċ	or Non-conformance	Ch	ief Eng	Descr	iption		Date	Verificatio	'n	QC Inspector
Doc/Data														
Equip/Tooling														
Operator												•		
Material														
Setup														
Other		1												
Process														
Supplier														
Training														
Unapproved	,													<u> </u>
				****	F	AUL	T CATE	GORY						
Landii	ng Gear				General	_	,		r				_	1
	Bending				Bend		Grain				Ovalized		L	Pressure/Forced
` *	Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re			Over/Under	tolerance	_	Temperature/Cure
	Cracks				Broken/Damaged		1	on Incomplete			Part Incorred		L	Weld
	—	/Crimped			Burrs		1	ions Incomplete/U	Inclear		Part Lost/Mi	ssing		Wrong Stock Pulled
	Cuffs				Contamination	L	Mainte	nance			Part Moved			
•	Heat Tre	at			Countersink	L	Mislabe	led			Positioned V	Vrong		,
	Inspection	on Strip in	Tube		Cut Too Short		Misread	I			Power Loss/	Surge		Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

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Work Ord <i>May-13-13 1:04</i>		1532		*101	1532*				Page 3
Item ID: Revision ID: Item Name:	D3199-1 Bracket			Accept	*N900040	100*	Setup	Start Stop	*NS1* *NS2*
Start Date: Required Date: Reference:	5/13/13 5/31/13	Start Qty: 30.00 Req'd Qty: 30.00	*30* *30*		Cust Item ID: Customer:				
Approvals:	Process Pla	an:	Date:	Tooling: SPC (Y/N):	Date:		Run	Start Stop	*NR1* *NR2*
Sequence ID/ Work Center II 150 *150* Powdercoat Powder Coating	D 19	Operation Description Grey Sandtex(Ref:4.3.5.6 Memo START TIM OVEN TEM FINISH TIM QC3- Inspect Part Finish	E: 11 32 PERATURE: 32	Set Up/ Run Hours 0.00	Tool ID Tool #	Code Qty	X 9 4	m-f	Reject Insp. Number Stamp 13/09/18 MB/69/18
160 QC Quality Control		Memo		0.00				· .	
170 *170* Packaging Packaging		Identify as per dwg & Sto	ck Location: 57 2.3	0.00		13/	k/18 (36	32

NCR:	Yes	1	Nο

Date:

NCR: Y	ICR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE												
											QA Closed:	Date	2:
Work Orde	rr:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	lo					Rework Scrap		ľ	Skid-tube Machining	Crosstube Small Fab	4	Water Jet	Engineering Quality Other
NCR N	lo					Use-as-is Work Order Update]		noforming Large Fab	Finishing Composite	, Rec/Stor	re/Packaging Supplier	Other
Root					Descri	ption of work order update	lni	itial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Chie	f Eng	Desc	ription	Date	Verification	QC Inspector
Ooc/Data	_												
quip/Tooling							İ						
Operator	_												
/laterial							ļ						į
etup	_												
Other							1						
rocess													
upplier													
raining													
Inapproved													
							AULT	CATE	GORY				
Landir	ng Ge	ear			_	General				_	-	_	
	╝	Bending				Bend		irain		L	Ovalized	_	Pressure/Forced
	c	Centre No	t Concer	ntric to (o/s	BOM/Route	Шн	lardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged	∐ lr	nspecti	on incomplete	<u></u>	Part Incorred	ct _	Weld
		Crushed/C	Crimped		L	Burrs	∐lr	nstruct	ions Incomplete/	'Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
ing in		Cuffs				Contamination	\	/lainte	nance	L	Part Moved		
الشروبيس ا	⊦	leat Trea	t			Countersink	\square	⁄lislabe	led		Positioned V	Vrong	
Ī	11	nspection	Strip in	Tube		Cut Too Short	\square	/lisread	I		Power Loss/	Surge	Other
	F	Ripples in	Bend			Drill Holes		ffset			·		
	T	Torque W	aves in E	xtrusion	ı [Drawing		ot of C	Calibration				
	T	Turning Se	equence			Finish		ot of S	equence				
	\neg	Wave/Twi	ist in Tub	e		Folio	По	utside	Dimensions				-

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Wor	k O	rder	ID	101532
$M_{\rm CD}$, 13	2 12	1.01.00	DM	

101532

Page 4 May-13-13 1:04:09 PM Accept *N900040100* D3199-1 Item ID: Setup Start **Revision ID:** Stop Bracket Item Name: *30* **Start Qty: 30.00 Start Date:** 5/13/13 **Cust Item ID:** Required Date: 5/31/13 Req'd Qty: 30.00 **Customer:** Reference: Run Start Date:_____ Tooling: Approvals: Date: Process Plan: Stop QC:_ Date: SPC (Y/N): Date: pt Reject y Qty N. ML5 13-09-20 MF 13-9-19 Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Run Hours Work Center ID Description Code QC21- Final Inspection - Work Order Release 0.00 180 *120* OC 0.00 Memo Quality Control

NCR:	Yes	1	No

DQA: ____Date: ____

NCR: Ye	es / No				WORK ORDER NON-	CON	FORI	MANCE / UP	DAIE	04.61	0-4	
		 								QA Closed:	Dat	te:
Work Order	r:				DISPOSITION				AGAINST DI	PARTMENT	/PROCESS	
Part No					Rework Scrap		1	Skid-tube Machining	Crosstube Small Fab	-4	Water Jet d. Eng. Coor.	Quality
NCR No	0				Use-as-is Work Order Update	}		noforming Large Fab	Finishing Composite	Rec/Stor	re/Packaging Supplier	Other
Root				Descri	ption of work order update	In	itial	Ac	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chi	ef Eng	Desc	ription	Date	Verification	n QC Inspector
Doc/Data					,							
quip/Tooling	_					1						
Operator												,
√laterial												
ietup												
Other												
Process												
Supplier	_											
raining												
Inapproved		<u></u>										
						AULT	CATE	GORY				· · · · · · · · · · · · · · · · · · ·
Landin			i	_	General	$\overline{}$			_ _	.	г	
-	Bending				Bend	—	Grain		_	Ovalized		Pressure/Forced
-	Centre No	ot Concei	ntric to (o/s _	BOM/Route	-	Hardwa		<u> </u>	Over/Under		Temperature/Cure
-	Cracks			-	Broken/Damaged		•	on Incomplete	. –	Part Incorred		Weld
-	Crushed/	Crimped		\vdash	Burrs	-		ions Incomplete/	Unclear	Part Lost/Mi	ssing [Wrong Stock Pulled
]	Cuffs			<u> </u>	Contamination	\mathbf{H}	Mainte			Part Moved		
-	Heat Trea				Countersink	\vdash	Mislabe			Positioned V	- r	
	Inspectio		Tube		Cut Too Short	$\boldsymbol{\vdash}$	Misread	1		Power Loss/	Surge [Other
Ĺ	Ripples in				Drill Holes	 	Offset					
L	Torque W			ր _	Drawing	-		Calibration				
	Turning S				Finish	-		equence				
.	Wave/Tw	vist in Tul	oe -		Folio		Outside	Dimensions				

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Status

May-13-13 1:04:09 PM

Work Order ID:

101532

Parent Item:

Comments:

Item Name

M304S20GA

D3199-1

IPP Rev:D

Parent Item Name:

Bracket

IPP Rev:C

Removed Scribing As per Rev B

05-11-05

JLM 06-11-24 JLM

IPP Rev:E 11.03.31 as per ecn 11-

531 DD verf:EC

Component Item ID/ Replacement Item ID

Mfg/ Purch

Purchased

Item No

Bin **Primary** Location

Last Location

Seq ID 100

Route

Measure Hand sf

Unit of

264.1986

Qty on

Start Date: 5/13/13

Start Qty: 30.00

0.099

Qty per Kit Total

Issued Qty 3,126315

Qty

13.08.30

Date

Issued

Required Date: 5/31/13

Required Qty: 30.00

304/316 .040 Sheet

Location MAT020

264.19861

117.15 147.04861

Loc Oty

Loc Code

DQA: Date: **WORK ORDER NON-CONFORMANCE / UPDATE** NCR: Yes / No QA Closed: Date: **AGAINST DEPARTMENT/PROCESS** DISPOSITION Work Order: Skid-tube Crosstube Water Jet Engineering Rework Prod. Eng. Coor. Small Fab Quality Part No. Scrap Machining Thermoforming Finishing Rec/Store/Packaging Other Use-as-is Work Order Update Large Fab Composite Supplier NCR No. Description of work order update Initial Action Sign & Root or Non-conformance Chief Eng **QC** Inspector Qty Description Cause Date Step Date Verification Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved

Landing (Gear	General		_		
	Bending	Bend		Grain	Ovalized	Pressure/Forced
	Centre Not Concentric to O/S	BOM/Route		Hardware	Over/Under tolerance	Temperature/Cure
	Cracks	Broken/Damaged		Inspection Incomplete	Part Incorrect	Weld
	Crushed/Crimped	Burrs		Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled
	Cuffs	Contamination		Maintenance	Part Moved	
	Heat Treat	Countersink		Mislabeled	Positioned Wrong	
	Inspection Strip in Tube	Cut Too Short		Misread	Power Loss/Surge	Other
	Ripples in Bend	Drill Holes		Offset		
	Torque Waves in Extrusion · [Drawing		Out of Calibration		
	Turning Sequence	Finish		Out of Sequence		
	Wave/Twist in Tube	Folio	Г	Outside Dimensions		

FAULT CATEGORY

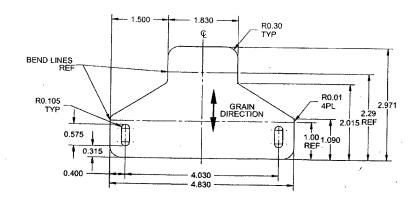
DART AEROSPACE LTD	Work Order:	101532
Description: Bracket	Part Number:	D3199-1
Inspection Dwg: D3199 Rev: E		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

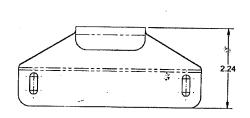
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.210	+0.005/-0.001	,210	_		V	Jkm - 01
0.575	+/-0.010	. 575	_		V	DKIII O
1.090	+/-0.010	1,090	_		V	
2.015	+/-0.010	2.015	_		V	
2.971	+/-0.010	2.972	_		V	
1.830	+/-0.010	1.832	-		v	
4.830	+/-0.010	4.832	_		V	
4.030	+/-0.010	4.030	_		V	
	·					

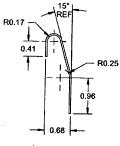
			DAG.		
Measured by:	Ae	Audited by:	27	Preliminary Approval:	
Date:	13.08.30	Date:	13.830)	Date:	

Rev	Date	Change	Revised by	Approved
Α	06.10.20	New Issue	KJ/JLM	TOPTOVE I
В	06.11.24	Dwg Revision revised	KJ/JLM	
С			KJ A	
D		Dwg Rev updated	KJ der	,



D3199-1F FLAT PATTERN





101832 MLJ 13-05-16

PELEASED 2011 -07- 18

D

NOTES:	
1) MATERIAL: AISI 304/316 SS SHEET, 0.040 THICK, ANNEALED, 2B FINISH	
PER MIL-S-5059, OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR	ASME SASAO
	ASING SAZ40
2) FINISH: POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3	**

С

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3199-X" AND B/N "BXXXXX" PER QSI 044 6.1
7) WEIGHT: D3199-1 = 0.11 lbs, D3199-3/-4 = 0.26 lbs EACH

F	E RE-DESIGNED D3199-3/-4/-3F PER CUSTOMER FEEDBACK						
	-	MIZE FIT.	MB	11.07.11			
D	RE-DESIGNED D3199-37-4/-3F PER CUSTOMER FEEDBACK TO ELIMINATE BINDING OF DOOR ONCE BRACKETS ARE INSTALLED. REF.: PAR11-79			мв	11.03.21		
С	ADD -3/-4 PART (SHEET 2-4)			HS	09.11.19		
Ð	2.24 WAS 2.142; ADD FINISH; UPDATE DWG			СВ	08,11.01		
Α	NEW ISSUE			CP	03.08.05		
REV.		DESCRIPTION			DATE		
DESIGN (IV)		av	DART AFPOSPA	DART AEROSPACE LTD			
DRAWN		_	HAWKESBURY, ONTARIO, CANADA				
CHECKED DRAWING NO.			REV. F				

D3199 MFG. APPR. SHEET 1 OF 4 APPROVED TITLE SCALE DE APPR. BRACKET DATE

11.07.11